*BY ORDER OF THE*
*SECRETARY OF THE AIR FORCE*

***AIR FORCE INSTRUCTION 33-110***

***1 JANUARY 1997***

***AIR FORCE MATERIEL COMMAND***
***Supplement 1***

***27 March 1997***

***Communications and Information***

***DATA ADMINISTRATION PROGRAM***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This Air Force instruction (AFI) implements Air Force Policy Directive (AFPD) 33-1, *Command, Control, Communications, and Computer (C4) Systems*. It provides guidance and procedures to administer the Air Force (AF) Data Administration (DA) Program. It applies to all Air Force organizations that plan, design, model, synchronize, standardize, and control Air Force data at all echelons. It applies to all computer systems. To better understand the data standardization process, refer to Department of Defense (DoD) Directive (DoDD) 8320.1, *DoD Data Administration*, September 26, 1991; DoD Manual 8320.1-M, *Data Administration Procedures*, March 29, 1994; and DoD Manual 8320.1-M-1, *Data Element Standardization Procedures*, January 15, 1993. Refer technical questions to Headquarters, Air Force Communications Agency (HQ AFCA), Data Management Division (HQ AFCA/XPD), 203 W. Losey Street, Room 1005, Scott AFB IL 62225-5219. Use AF Form 847, **Recommendation for Change of Publication**, to refer recommended changes and conflicts between this and other publications to HQ AFCA, Policy Branch (HQ AFCA/XPPD), 203 W. Losey Street, Room 1065, Scott AFB IL 62225-5224. Major commands (MAJCOM), field operating agencies (FOA), and direct reporting units (DRU) send one copy of their supplement to HQ AFCA/XPPD. **Attachment 1** lists references, abbreviations, acronyms, and terms used in this instruction. **Attachment 2** provides guidance on completing AF Form 247, **Standard Data Element and Related Features Request**. Use the questions at **Attachment 3**, and AF Form 2519, **All Purpose Checklist** (available electronically) to develop a checklist on data administration tasks.

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This supplement contains guidance and procedures to administer the Air Force Materiel Command (AFMC) Data Administration Program. It applies to all AFMC organizations that plan, design, model, synchronize, standardize, and control AFMC data at all echelons. It does not apply to the Air National Guard or US Air Force Reserve units and members. Contact the AFMC MAJCOM Data Administrator (MDAd) to obtain copies of the documents referenced in this supplement.

*SUMMARY OF REVISIONS*

This revision updates the entire document.

**Supersession history:** AFRs 4-29, 23 Apr 90; 700-19, 1 Feb 90 and 700-20, 1 Feb 90; AFI 33-110, 25 May 94 and AFI 33-110, 1 Nov 95..

**(AFMC)** This document is substantially revised and must be completely reviewed.

**AFI 33-106, 1 September 1997, is supplemented as follows:**

*Section A—Guidance*

**1. General.** Within the Air Force Data Administration Program, the Air Force component data administrator (AFCDAd) is responsible for ensuring the identification, documentation, and support of mission-essential data requirements of commanders and decision makers. To aid the AFCDAd, data administrators (DAd) are appointed at all echelons to establish organizational goals, identify support requirements (including training and human resources), and implement stated DA policies. With the coordination and support of functional area experts (functional data coordinators[FDC]), DAds:

1.1. Manage data as a shared corporate resource.

1.2. Take appropriate measures to protect data.

1.3. Use information engineering practices and methodologies as identified in DoDD 8320.1 to identify, document, and retain only mission-essential data requirements.

1.4. When reviewing data elements, consider the Paperwork Reduction Act, the Privacy Act and associated publications, security classification, and operational security. Eliminate the possibility of redundancy or inconsistency by ensuring application of naming conventions prescribed in DoD Manual 8320.1-M-1.

**2. Strategic Data Planning.** Strategic data planning practices involve structuring data and applications independently to allow data sharing across functions and among organizations from the unit level up through the HQ Air Force and joint levels, while remaining consistent with national security and privacy requirements. This concept requires planning at the initial stages of system development to use or "share" standardized data that applies across all functional areas. Future data standards' efforts will comply with approved information modernization plans. In many cases, the Air Force can take advantage of data already standardized by DoD functional data administrators (FDAd). The FDAds' initiatives provide sharable data across their functional domain, but planning is still required to apply the highest level DoD structure to Air Force application development efforts. The DoD structure (framework) is further described below.

**3. Data Architecture and Modeling.** DoD Manual 8320.1-M defines data architectures as the framework for organizing and defining the interrelationships of data in support of an organization's missions, functions, goals, objectives, and strategies. Data architectures provide the basis for the incremental, ordered design and development of data bases based on successively more detailed levels of modeling. For the Air Force, the current strategy is to use the DoD Enterprise Data Model as the primary framework

for defining interrelationships of data. The DoD framework began as a very high level entity relationship model, but the detailed modeling efforts of the FDAds have expanded it. A copy of the current DoD Enterprise Data Model is available through HQ AFCA/XPD. As the data administration program matures, the Air Force is building more detailed views based on the functional area and automated systems under consideration. This instruction establishes the requirement for all software development to include development of an associated data model that the Air Force can integrate with the DoD Enterprise Data Model and support proper use of existing standardized data elements.

3.1. (Added-AFMC) AFMC Candidate Standard Data Elements. Within AFMC, all development of candidate standard data elements will be based on an Integration Definition for Information Modeling (IDEF1X) Data Model. Data modeling concepts are more fully described in DoDM 8320.1-M-x, *DoD Enterprise Data Model Development, Approval, and Maintenance Procedures.* The IDEF1X standard, with rules, semantics, and methodology, is defined in Federal Information Processing Standards (FIPS) Publication 184, *Specifications for Integration Definition for Information Modeling (IDEF1X).*

3.1.1. (Added-AFMC) Data Model Relationship to the DoD Data Model. All data models developed within AFMC will be developed, approved, and maintained as extensions to a specific subject area view of the DoD Data Model. (*Data model developers should secure access or obtain a copy of the applicable subject area view of the current DoD data model, to ensure data models are developed as valid extensions to the DoD model. Procedures and assistance in obtaining the DoD Data Model in electronic format are available from AFMC CSO/SCWT.)*

3.1.2. (Added-AFMC) Use of Activity Models (Process Models) Within AFMC. DoD IDEF1X data models may be based on activity models; however, activity models are not a requirement for data model development. The purpose and development stages for activity models are covered in DoDM 8320.1-M, *DoD Data Administration Procedures,* appendix D, D-1 through D-3. An example of an activity modeling methodology is the Integration Definition for Function Modeling (IDEFO) standard, defined in FIPS Publication 183, *Integration Definition for Function Modeling (IDEFO).*

3.1.3. (Added-AFMC) References for Data Model Development Procedures. DoD Data Model development procedures are a combination of the procedures for developing, extending, and approving the DoD Data Model described in DoDM 8320.1-M-x, and procedures for developing IDEF1X data models as described in FIPS Publication 184. DoDM 8320.1-M, 4-5 through 4-7 and appendix D, D-3 through D-4, also contain general procedures for the development, approval, and maintenance of data models.

3.1.3.1. (Added-AFMC) Obtaining FIPS Publication 184. Data model developers should obtain a copy of FIPS Publication 184 through the following address:

The National Technical Information Service (NTIS)

US Department of Commerce

Springfield, VA 22161

NTIS Sales Desk: (703) 487-4650

3.1.3.2. (Added-AFMC) IDEF1X Data Model Development Methodology. IDEF1X data models are developed as a collaborative effort of the system development project manager, data modeler, and functional (subject matter) experts. Typically, the model is developed in a series of modeling sessions facilitated by the data modeler. The process for developing an

IDEFIX data model is contained in FIPS Publication 184, Annex A (section A3). An expample process is contained in attachment 5(Added).

3.1.3.3. (Added-AFMC) Developing IDEF1X Data Models as Extensions of the DoD Data Model. DoDM 8320.1-M-x contains requirements and procedures for development and approval of data models as extensions to the DoD Data Model. with the entities of the proposed model related to existing entities of the DoD model. An AFMC proposed model, with entity and attribute metadata, is submitted through the AFMC (MDAd) for DoD approval as an extension of the DoD Data Model by means of a Data Standardization Proposal Package (attachment 4(Added).

3.1.3.4. (Added-AFMC) Data Modeling Software Tools. Within AFMC, all data models developed for software development or modification projects that are subject to the data standardization applicability criteria of AFI 33-110, section 4.2, must be developed and submitted through the AFMC MDAd for approval on IDEF1X-compliant software tools. IDEF1X-compliant models are necessary to facilitate DoD review of data models and associated entities and attributes.

3.1.3.5. (Added-AFMC) Data Modeling Assistance. The AFMC MDAd provides technical assistance and on-site support to AFMC organizations in data modeling, on an as-required basis. This support includes planning, facilitating, and technical support of data modeling sessions utilizing a software modeling tool.

3.1.3.6. (Added-AFMC) Storage of Data Models. A central DoD repository for storage of data models is in development, but has not yet been implemented. Until DoD determines the central repository to be used for storage and management of data models, AFMC model developers will develop and store all data models using IDEF1X-compliant local software tools.

**4. Data Element Standardization.** The physical implementation of sharable data bases relies on the creation of a robust, broadly accepted set of standard data elements that the Air Force can store, transmit, and manipulate without the overhead of sophisticated translators and interfaces along the way. Each data element represents a single informational concept (for example, a representative code, a speed of a vehicle, or a title of a book). There are many instances and an extensive domain, but the data element can have only one definition. We must precisely define and agree on the number of characters, the precision, and the allowable values throughout the DoD before the DoD will approve the element as a standard. DoD Manual 8320.1-M-1 provides specific guidance on the DoD process for submitting data elements. Air Force field activities will submit standard data element proposal packages with the assistance provided by HQ AFCA/XPD. The DoD repository for standardized data is the Defense Data Dictionary System (DDDS). This AFI directs commands to discontinue maintenance, development, and implementation of local data repositories not approved by HQ United States Air Force/Communications and Information (HQ USAF/SC) or Defense Information Systems Agency (DISA), that duplicate the functionality of the DDDS, to support data administration and standardization. All Air Force development efforts must interrogate the DDDS and apply the approved standard data elements in their application development. As the DDDS evolves, the Air Force will issue incremental guidance through the AF DA Program Manager at HQ AFCA/XPD. The guidance will also provide guidelines to use in implementing the latest tools and procedures.

4.1. In operational systems, you must match or map existing data elements to DoD standard data elements in the DDDS, when economically feasible, to provide a data migration path for follow-on sys-

tems. The Air Force Data Dictionary (AFDD) will continue to support its current function as a data dictionary with codes and values until functionally supported by the DDDS. **Attachment 2** provides information for using AF Form 247 when updating the code values within AFDD for current system users.

4.1. (AFMC) AFMC organizations may use the Air Force Data Dictionary, Corporate Data Repository System, or other repositories or data dictionaries in current AFMC use to manage legacy data elements until this function is supported by the Defense Data Repository System (DDRS)/Defense Data Dictionary System (DDDS).

4.2. All new systems and major redesigns (changes of 30 percent or more of existing code) must comply with data standardization rules and guidance prescribed by this instruction and DoD Manual 8320.1-M-1. System developers shall submit proposed data element candidates prior to development of the data model. It is not necessary to modify any existing system for the sole purpose of using standardized data elements.

4.3. Nonstandard systems sharing data with systems using standard data elements will bear the cost of translation.

4.4. Apply the following format standard: In instances where data elements are defined for date values, apply the DoD standard yyyymmdd (yyyy=year, mm=month, dd=day).

4.5. (Added-AFMC) Development of New Standard Data Elements. Standard data elements will be supported with an associated IDEF1X data model, and be developed according to procedures provided in DoDM 8320.1-M-1, *DoD Data Element Standardization Procedures*, chapter 4, and DoDM 8320.1-M, chapter 4 and appendix E. Guidelines for entity (corresponding to prime word) design, definition, and naming are also contained in DoDM 8320.1-M-x.

4.6. (Added-AFMC) Submittal of Data Standardization Proposal Packages. The data standardization proposal package (attachment 4(Added)) (also referred to as a standard data element proposal package or data model package in AFI 33-110) is used to propose a data model, with its associated data entities and attributes, for incorporation into the DoD Data Model. Upon agreement by DoD, the entities and attributes of the data model become approved data elements (prime words, standard data elements, and generic data elements) in the DDDS. The primary reference for preparation and submittal of the data standardization proposal package is DoDM 8320.1-M-x.

4.6.1. (Added-AFMC) Format. The required format of data standardization proposal packages is defined in DoDM 8320.1-M-x, chapter 5. The sample format for AFMC proposal packages, found in attachment 4(Added), consists of a cover letter with six attachments: (1) Basic Package Information, (2) Entity Information, (3) Attribute Information, (4) Relationship Information, (5) Model View, and (6) Request for Registration of Use (this is an addition to the DoDM 8320.1-M-x format). A copy of the Request for Registration of Use form is to be completed for each data element reused from DDDS. The purpose of submitting this form is to provide feedback on which data elements are being reused by DoD activities. All parts of the proposal package are to be submitted electronically.

4.6.1.1. (Added-AFMC) Preparation Checklist References. DoDM 8320.1-M-x, appendix C, contains a set of checklists which may assist in preparing a data standardization proposal package. Included are a Basic Proposal Package Information Checklist, Entity Information Checklist, Attribute Information Checklist, Relationship Information Checklist, and a Compliance Checklist.

4.6.1.2. (Added-AFMC) Size. If a large model is being used in a proposal package, it should be partitioned into subsets that can be submitted in multiple proposal packages, each generally limited to approximately 20 entities and 200 attributes. Each subset of the larger model should represent a logical grouping of entities based on related functional content. This does not imply that much smaller packages, or larger data models that cannot be subdivided to separate packages of this size, cannot be submitted. Proposal packages limited to this size have a manageable scope and the greatest chance of providing approved data elements within a reasonable period of time. For further information, see DoDM 8320.1-M-x, chapter 5 (B).

4.6.2. (Added-AFMC) Responsibilities for Preparation of Data Standardization Proposal Packages. The software developer prepares data models and data element metadata in a format as close to that used in the proposal package attachments as possible. The organization's Data Administration staff performs a technical review of the proposal package and prepares the final proposal package. Deviations from this process are permitted based on organization structure and expertise, so long as the end product is the same. Packages requiring further actions will be returned.

4.6.3. (Added-AFMC) Submittal for Approval of Data Standardization Proposal Packages. AFMC units without waiver letters from the HQ AFMC MDAd are to submit electronic proposal packages to the MDAd, who will review the packages, revise if necessary, and forward to HQ AFCA/XPD. The AFMC MDAd will only review initial submissions to ensure acceptable data standardization procedures are in place before proposal packages are sent out of the command. Thereafter, The AFMC MDAd will certify an AFMC organization by granting a waiver, by letter, per-mitting submission of proposal packages directly to HQ AFCA/XPD. The proposal package cover letter is to be signed by the unit Data Administrator (DAd) or head of the Data Administration activity. The proposal package submission should be submitted electronically to the MDAd or on 3 1/2 diskette. Submit the proposal package to:

Without waiver:

AFMC CSO/SCWT

Attn: AFMC Data Administrator

4225 Logistics Ave Ste 18

WPAFB OH 45433-5757

With waiver:

HQ AFCA/XPD

203 W. Losey Street, Rm. 1065

Scott AFB IL 62225-5224

4.7. (Added-AFMC) Defense Data Dictionary System (DDDS). AFMC organizations will query DDDS during software development, and apply the DoD approved, candidate, or developmental standard data elements in their application development, if available. If suitable approved, candidate, or developmental data elements are not available in DDDS, AFMC organizations will develop new standard data elements and submit them for DoD approval. The DDDS database is accessed and utilized through two methods: remote DDDS access, or through use of the Personal Computer Access Tool (PCAT). DDDS remote access has the advantage of always providing the most current data base information; PCAT has advantages of providing a different, more user-friendly interface and flexible

search and reporting capabilities; monthly DDDS data base updates for PCAT are available. Technical assistance and current procedures for accessing DDDS and PCAT are available from AFMC MDAd.

***Section B—Functional Area Responsibilities***

**5. Headquarters, United States Air Force, DCS/Communications and Information.** As the AFCDAd, HQ USAF/SC:

5.1. Appoints a primary point of contact (POC) to implement DA programs.

5.2. Plans for and provides resources for DA activities throughout the Air Force.

5.3. Fulfills requirements levied by the AF DA Program's Annual Planning Guidance by reviewing, choosing recommendations, approving, and forwarding requirements proposed by the AF DA POC.

5.4. Coordinates Data Administration Strategic Plan (DASP) information from the DoD DAd, approves adjustments to Air Force action plans, and prescribes, and approves DA implementation policies and procedures for publication.

**6. Air Force Data Administration Point of Contact.** As the AFDA POC, HQ USAF/SCTS, Chief Software Division:

6.1. Represents the Department of the Air Force to DoD on matters pertaining to DA.

6.2. Oversees Air Force matters pertaining to DA standards development and adoption.

6.3. Prepares the HQ USAF portion of the DASP for AFCDAd approval according to the DA Program Annual Planning Guidance.

6.4. Serves as focal point to ensure data systems are in compliance with data management policies, standards, and procedures.

6.5. Develops decision packages for AFCDAd approval to resolve disputes among submitters over standard element approval, installation, and archiving.

**7. Headquarters Air Force Communications Agency, Data Management Division:**

7.1. Acts as program manager for the DA program.

7.2. Supports the Air Staff in execution of the DA program.

7.3. Serves as focal point to make sure systems developers have the necessary tools and training for DA issues related to compliance with Air Force Technical Reference Code (TRC) S4, Computing Services.

7.4. Performs quality control, reviews, and coordinates on functional area data models developed by Central Design Activities (CDA)/Software Support Activity (SSA) and provides technical assessment of functional data requirements submitted by the FDCs.

7.5. Coordinates with the AFCDAd POC and FDAds on elements that fail technical review and makes recommendations to the FDAd to improve the technical quality of the proposed element.

7.6. Provides the means to house data models and data elements.

7.7. Consolidates and reviews AF DA funding requirements and recommends appropriate adjustments and allocations.

7.8. Assists the DoD DAd in integrating the Air Force inputs into the DoD data model.

7.9. Identifies and funds training requirements. Serves as the Air Force single POC for DISA-sponsored DA training.

7.10. Assists FDCs in evaluating functional publications for adequacy of DA policies and procedures.

7.11. Recommends archiving of standard elements when no longer needed or cost effective to maintain and manage.

**8. Functional Data Coordinators.** FDCs provide support to the AF DA Program by reviewing data modeling and data element standardization efforts for major systems developments in their functional area. Air Force FDCs work with DoD FDAds to see that DoD data standardization activities consider Air Force functional requirements. FDCs:

8.1. Reconcile and validate functional area activity and data models submitted by systems developers and database managers.

8.2. Assist the AF DA Program Office in integrating approved Air Force submissions into the DoD-approved data models.

8.3. Consult within the functional area and develop the functional input to the DASP (updated annually), based on functional area action plans.

8.4. Ensure the functional area staff supporting the AF DA Program is trained.

8.5. Maintain data element consistency among all development projects by using existing standard elements. This includes resolving differences in documentation for the same data element and staffing with interested users.

**9. Major Commands and Field Operating Agencies.** MAJCOMs and FOAs execute the AF DA Program within their areas of responsibility by using DoD and Air Force policies, standards, and procedures. MAJCOMs/FOAs designate a MAJCOM Data Administrator (MDAd) to provide MAJCOM-level technical expertise, enforce standards, identify requirements, and perform data management duties for the MAJCOM/FOA. MDAds:

9.1. Consult with functionals within the MAJCOM and develop the organizational DASP (updated annually), which identifies short- and long-range development plans and resource requirements needed to carry out the AF DA Program.

9.1. (AFMC) AFMC organizations execute the Air Force DA program within their areas of responsibility using DoD, Air Force, and AFMC policies, standards, and procedures. AFMC organizations designate a DAd or Data Administration point of contact to enforce standards, identify requirements and perform data management duties for the organization. Whether a DAd or point of contact is designated, and whether this position is full or part time, depends on the level of organization, amount of software development conducted, and the judgment of the organization commander as to staffing required to meet requirements of the AF DA program.

9.1.1. (Added-AFMC) AFMC Field Operating Agency Data Administrator (DAd) Responsibilities**.** The DAd:

- Ensures a viable data administration program is established and that prescribed standards are followed.
- Identifies, and submits through established channels, short- and long-range resource requirements for implementing the data administration program.
- Ensures the inclusion of data administration requirements into unit information management plans, and in appropriate organization initiatives.
- Establishes liaison with the communications-computer community to ensure the Command, Control, Communications, Computer (C4) Systems Requirements Document (C4SRD) review process observes the use of standard data elements in new or modified information systems.
- Ensures information system designs, developments, modifications, modernizations, implementations, and life-cycle management efforts are accomplished to support the AFMC Data Administration Program.
- Assists systems developers in data model development, coordinates on data models prior to new system development or major reengineering efforts, and forwards models, data elements, and supporting metadata to the MDAd for validation and submission to HQ AFCA/XPD.
- Identifies organization data administration training requirements to meet AFMC Data Administration Strategic Plan goals.
- Provides training requirements to HQ AFCA.

9.1.2. (Added-AFMC) DAd Training. Funding and scheduling for AFMC personnel to attend training courses in DoD Data Administration are currently available from HQ AFCA/XPD, Scott AFB IL. Course descriptions of the following are available from HQ AFCA/XPD (DSN 576-5699) or from the AFMC MDAd (AFMC CSO/SCWT, DSN 787-1858). It is recommended that AFMC DAds accomplish the following minimum training:

- IDEF1X training: The IDEF1X standard is the basis of DoD data modeling. The “IDEFO and IDEFIX Modeling” course (POC: HQ AFCA/XPD) or equivalent meets this requirement training.
- The “Data Standardization and Defense Data Dictionary System (DDDS)” course (POC: HQ AFCA/XPD) or equivalent meets this requirement.
- In addition to the above training, vendor training in an IDEF1X data modeling software tool is directly beneficial to a DAd or other personnel in Data Administration. Funding and scheduling for this training are available through HQ AFCA/XPD.

9.2. Ensure automated system designs, developments, modifications, modernizations, implementations, and life-cycle management efforts are accomplished in compliance with DoD and Air Force directives.

9.3. Arbitrate DA concerns which arise between the functional user and technical communities at the MAJCOM level.

9.4. Coordinate the review of other MAJCOM data submissions forwarded by the AFDA Program Office with the MAJCOM functional activity and/or software development activity.

9.5. Make sure you coordinate any computer systems requirements with the MDAd during the review process for new or modified systems (including contract proposal evaluations). Solicitations relating to data development must contain terms and conditions for enforcement of applicable Air Force data standardization publications.

9.6. Identify DA training and resource requirements to meet stated organization DASP goals.

9.7. Support ongoing efforts to measure and evaluate the use of standardized data. MDAds keep historical information to observe trends and avoid (or minimize) problems when possible.

**10. Air Force Central Design Activity, Software Development Activity (SDA), and Software Support Activity Organizations:**

10.1. Track the exchange of data across data bases, data systems, and functional lines.

10.2. Compare projected activities in data bases and systems to actual activities.

10.3. Document deviations from approved logical models when developing physical data bases.

10.4. Develop data model packages before new system development or reengineering efforts, and send models, data elements, and supporting metadata to the appropriate FDC for validation during the design phase.

10.4. (AFMC) Data models and data elements will be submitted as Data Standardization Proposal Packages (see paragraph 4.6, this supplement).

10.5. Develop data models using the Integration Definition for Information Modeling (IDEF1X) methodology for modernization of selected migration systems and new software developments.

10.5. (AFMC) See paragraph 3.1, this supplement for IDEF1X development procedures.

10.6. Reengineer legacy systems to extract application metadata and business rules for use in modernizing systems where feasible.

10.7. Provide MDAd with DA resource requirements and status of software development efforts requiring data element standardization.

10.8. Comply with DoD Manual 8320.1-M-1.

10.8. (AFMC) See paragraph 4.5, this supplement.

**11. Air Education Training Command (AETC).** In response to identified requirements, AETC:

11.1. Develops training plans and material for a comprehensive training program that addresses all aspects of DA, and oversees the overall effectiveness of that training.

11.2. Establishes DA curricula and formal courses identified by the AFCDAd in coordination with HQ USAF/SCXB.

**12. Form Prescribed:** AF Form 247, **Standard Data Element and Related Features Request**.

JOHN S. FAIRFIELD, Lt General, USAF
DCS/Communications and Information

## Attachment 1

## GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS

***References***

AFPD 33-1,. *Command, Control, Communications, and Computer (C4) Systems*.

DoDD 8320.1, *DoD Data Administration*, September 26, 1991.

DoD Manual 8320.1-M, *Data Administration Procedures*, March 29, 1994.

DoD Manual 8320.1-M-1, *Data Element Standardization Procedures*, January 15, 1993.

JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, March 23, 1994.

***Abbreviations and Acronyms***

**AETC—**Air Education Training Command

**AF—**Air Force

**AFCDAd—**Air Force Component Data Administrator

**AFDD—**Air Force Data Dictionary

**AFI—**Air Force Instruction

**AFIRDS—**Air Force Information Resources Dictionary System

**AFPD—**Air Force Policy Directive

**AIS—**Automated Information System

**AN—**Alphanumeric

**CASE—**Computer-Aided Software Engineering

**CDA—**Central Design Activity

**CDAd—**Component Data Administrator

**CSAD—**Computer Systems Authorization Directory

**DA—**Data Administration

**DAd—**Data Administrator

**DASP—**Data Administration Strategic Plan

**DBMS—**Data Base Management System

**DDDS—**Defense Data Dictionary System

**DISA—**Defense Information Systems Agency

**DoD—**Department of Defense

**DoDD—**Department of Defense Directive

**DRU—**Direct Reporting Unit

**DSD—**Data System Designator

**DUI—**Data Use Identifier

**FDC—**Functional Data Coordinator

**FDAd—**Functional Data Administrator

**FOA—**Field Operating Agency

**IDEF1X—**Integration DEFinition for Information Modeling

**JP—**Joint Publication

**MAJCOM—**Major Command

**MDAd—**MAJCOM Data Administrator

**OPR—**Office of Primary Responsibility

**POC—**Point of Contact

**SDA—**Software Design Activity

**SSA—**Software Support Activity

**STID—**Standard Identification

**TRC—**Technical Reference Code

***Terms***

**Acronym—**A name formed from the initial letters or groups of letters of words in a set phrase or series of words.

**(Added-AFMC) Activity (function) Model—**Activity or function models document the functional activities of an organization.

**Air Force Corporate Data Dictionary—**Composite program consisting of the Air Force Data Dictionary (AFDD), Computer Systems Authorization Directory (CSAD), Air Force Information Resources Dictionary System (AFIRDS) and Model Library.

**Air Force Data Dictionary (AFDD)—**Data element dictionary for those Department of Defense and Air Force data elements and related features authorized for use within the Air Force.

**Air Force Information Resources Dictionary System (AFIRDS)—**A software tool used as a data dictionary for management of metadata (data about data). It supports research and maintenance of existing data elements and is used to create new elements using the DoD standardization guidelines.

**Alias—1.** An alternate label (for example, a label and one or more aliases) used to refer to the same data element or point in a computer program. **2.**Synonym for alternate name.

**Application (Program)—1.** A computer program used for a particular kind of work, such as word processing or data base management. The term is commonly used interchangeably with "Program". **2.** The definition or procedure for solving a problem with a computer.

**Command, Control, Communications, and Computer (C4) Systems—**(DoD) Integrated systems of

doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications designed to support a commander's exercise of command and control across the range of military operations. Also called **C4 Systems**. (JMTGM # 081-95.)

**C4 Systems—**An integrated system of doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications designed to support a commander's exercise of command and control, through all phases of the operational continuum. It includes base visual information support systems.

**Candidate Element—**Generic elements and data elements that have been submitted by a functional data administrator (FDAd) or component data administrator (CDAd) for formal review.

**Class Word—**A word in the name of a data element describing the category to which the data element belongs. The word establishes the general structure and domain of a standard data element.

**Computer Systems Authorization Directory (CSAD)—**Catalog of all authorized computer systems within the Air Force inventory.

**Data—**(DoD) Representation of facts, concepts, or instructions formalized suitable for communication, interpretation, or processing by humans or by automatic means. Any representations such as characters or analog quantities to which meaning is or might be assigned. (JP 1-02)

**Data Administrator (DAd)—**A person or group that ensures the utility of data used within an organization by defining data policies and standards, planning for the efficient use of data, coordinating data structures among organizational components, performing logical data base designs, and defining data security procedures.

**Data Architecture—**A framework for organizing data into a manageable grouping to facilitate shared use and control throughout the Air Force.

**Data Attribute—**A characteristic of a unit of data such as length, value, or method of representation. Also, a property inherent in an entity or associated with that entity for data base purposes.

**Data Base—**(DoD) **1.** Information that is normally structured and indexed for user access and review. Data bases may exist as physical files (folders, documents, etc.) or formatted automated data processing system data files (JP 1-02). **2.** A structure or organized collection of information, which may be accessed by the computer. **3.** A set of data that is required for a specific purpose that is fundamental to a system, project, enterprise, or business. A data base may consist of one or more data banks and be geographically distributed among several repositories.

**Data Administration (DA)—**The analysis, classification, and maintenance of an organization's data and data relationships. It includes the development of data models and dictionaries, which combined with transaction processing, are the raw materials for data base design. The activity responsible for enforcing policies and standards set by the DAd, to include providing technical support for physical data base definition, design, implementation, maintenance, integrity, and security, and coordinating with computer operations technicians, system developers, vendors, and users. Orients administration toward technical support for data bases and the effective and efficient use of information technology resources.

**Data Base Management System (DBMS)—**The data processing system that provides the means to store, organize, and access the information in a data base.

**Data Chain—**A combination of logically related data elements. For example, the data chain "DATE" is comprised of the data elements "year," "month," and "day."

**Data Code—**(DoD) **1.** A number, letter, character, or any combination thereof used to represent a data element or data item. For example, the data codes "E8," "O3," and "O6" might be used to represent the data items of sergeant, captain, and colonel under the data element "military personnel grade." (JP 1-02) **2.** Numbers, letters, characters, blanks, or any combination thereof (maximum of 29-character positions) used to represent a data element or data item within a standard data element or chain.

**Data Code-for Domain Value—**A number, letter, character, or any combination of these used to represent a data element. For example, the data codes "01," "02," and "03" might be used to represent the data items of blue, brown, and green in the data element "person eye color code."

**Data Dictionary—**A specialized type of data base containing metadata and managed by a data dictionary system; a repository of information describing the characteristics of data used to design, monitor, document, protect, and control data in information systems and data bases; an application of a data dictionary system.

**Data Element—**A basic unit of information built on standard structures having a unique meaning and distinct units or values. Examples of data elements are military personnel grade, sex, race, geographic location, and unit. In electronic recordkeeping, a combination of characters or bytes referring to one separate item of information, such as name, address, or age.

**Data Element Alias—**See **Alias**.

**Data Element Standardization—**The process of uniquely defining the characteristics of each shared data element to ensure acceptance by all data users across an organization. The process of documenting the uniform identification, definition and representation of data in accordance with established rules and installing the results in systems.

**Data Entity—**An object of interest to the enterprise, usually tracked by an automated system.

**Data Integrity—1.** The process of providing accidental erasure or adulteration of data in a data base. Data integrity includes data locking, consistency, transaction control, and synchronous writing of data. **2.** The assurance that the data received is the same data that was sent. **3.** The concept that the data base management system will perform its function consistently, preserve data without unintentional change, produce correct results to the defined degree of precision, and maintain data availability.

**Data Management—**The function of controlling the acquisition, analysis, storage, retrieval, and distribution of data.

**(Added-AFMC) Data Model—**A graphical and textual representation that identifies the data needed by an organization to achieve its mission, functions, goals, objectives, and strategies. It describes the scope, boundaries, and types of data needed to support the functional activities at all levels of the organization.

**Data Resource—**Any data created manually or by automatic means, used by a system or enterprise to represent its information.

**Data Source—**A functional unit that originates data.

**Data Steward—**A person or group that manages the development, approval, and use of data within a specified functional area, ensuring that it can be used to satisfy data requirements throughout the organization.

**Data Structure—**The framework that defines the specifics about one or more types of data that support the user systems. The data structure includes the collection of record types, linkages, fields, entry points,

and integrity rules.

**Data Value—**Qualitative and quantitative data expressions that represent the contents of a generic element or data element.

**Domain—1.** The independent variable used to express a function. Examples of domain are time, frequency, and space. **2.** In distributed networks, all the hardware and software under the control of a specified set of one or more host processors. **3.** A set of permissible data values from which actual values are taken for a particular attribute or specific data element. **4.** In a relational data base, all of the permissible tuples for a given relation.

**General Domain—**The permissible data values allowed in representations of a data element, defined in terms of the character set that can be used (for example, A-Z, 0-9, etc.).

**Generic Element—**A structure used to specify a domain for data (either specific or generalized) which conveys meaning for many different data objects. The generic element, however, has no such organizational context other than to define a general class of data and see that consistency in structure and domain.

**Information—**(DoD) **1.** Facts, data, or instructions in any medium or form. (Approved by JMTGM# 034-96.) **2.** Any communication or reception of knowledge such as facts, data, or opinions, including numerical, graphic, or narrative forms, whether oral or maintained in any medium, including computerized data bases, paper, microfilm, or magnetic tape.

**Information Engineering—**A formal software engineering methodology that covers the complete information system life cycle from organization mission to application software and data base development and maintenance. This data-driven, top-down methodology is supported by computer-aided software engineering (CASE) tools that enforce the procedures, standards and rules of the information engineering methodology.

**Information Model—**A term used to describe the information resources of the organization and their interrelationships. It is used to support data modeling and resulting data and document storage design requirements. It provides the information resource managers' views of the architecture. A model that represents the processes, entities, information flows, and elements of an organization and all relationships between these factors.

**Information System—**(DoD) **1.** The organized collection, processing, transmission, and dissemination of information, in accordance with defined procedures, whether automated or manual. In information warfare, this includes the entire infrastructure, organization, and components that collect, process, store, transmit, display, disseminate, and act on information. See also information; information warfare. (Approved by JMTGM# 034-96). **2.** An automated or manual system comprised of people, machines, and, or methods organized to collect, process, transmit, and disseminate data that represents user information. The organized collection, processing, maintenance, transmission, and dissemination of information in accordance with defined procedures, whether automated or manual.

**(Added-AFMC) Integration Definition for Information Modeling (IDEFIX)—**Data models constructed of entities (a set of real or abstract things), attributes (entity characteristics or properties), and relationships (associations between entities).

**Legacy Systems—**Systems that are candidates for phase-out, upgrade, or replacement. Generally, legacy systems are in this category because they do not meet current standards. Legacy system workloads must be converted, transitioned, or phased out (eliminated). An existing automated information system (AIS)

that duplicates the support services provided by the migration system. Legacy systems will be terminated so that all future AIS development and modernization can be applied to the migration system.

**Metadata—**Information describing the characteristics of data; data or information about data; descriptive information about an organization's data, data activities, systems, and holdings.

**Migration System—**An existing automated information system (AIS), or a planned and approved AIS, that has been officially designated to support common processes for a functional activity applicable to use DoD-wide or DoD component-wide. Systems in this category, even though fully deployed and operational, have been determined for transitioning to a new environment or infrastructure. A migration system may need to undergo transition to the standard technical environment and standard definitions being established through the Defense Information Management (IM) program, and must "migrate" toward that standard. In that process it must become compliant with the Reference Model and the Standards Profile. A system in this category may require detailed analysis that involve the total redesign, reprogramming, testing, and implementation because of a new environment and how the "users" have changed their work methods and processes. The detailed analysis may identify the difference between "as is" and the "to be" system.

**Mission—**(DoD) **1.** The task, together with the purpose, that clearly indicates the action to be taken and the reason therefore. **2.** In common usage, especially when applied to lower military units, a duty assigned to an individual or unit; a task. **3.** The dispatching of one or more aircraft to accomplish one particular task (JP 1-02). **4.** A general statement of the purpose and nature of the organization.

**Model Library—**Directory of Air Force data models.

**Object—**A passive receiver of information. Access to an object implies access to the information the object contains. Examples of objects are: records, blocks, pages, segments, files, directories, directory trees, and programs, as well as bits, bytes, words, fields, processors, video displays, keyboards, clocks, printers, and network nodes. A person, place, thing, concept, event, or activity about which an organization keeps information.

**Organizational Data Administrator—**An individual or organizational unit generally responsible for the data design, modeling, analysis, and management of data and systems development efforts.

**Qualitative Data—**A data value that is a non-numeric description of a person, place, thing, event, activity, or concept.

**Quantitative Data—**Numerical expressions that use Arabic numbers upon which mathematical operations can be performed.

**Reference Model—**A generic set of concepts, entities, interfaces, and diagrams that provides a basis for the specification of standards.

**Specific Domain—**The acceptable values allowed in a prescribed set of data representations.

**Standards Profile—**A detailed list of standards and methodology to achieve interoperability, interconnectivity, portability, and reduced life cycle costs across a broad spectrum of systems/subsystems.

**System Developer—**A central design activity (CDA), software development activity (SDA), or software support activity (SSA) which is responsible for the development and/or maintenance of automated information systems (AIS).

**Technical Reference Code—**Codes that identify the policy and standards considerations for the design of information systems and services.

**User—1.** A person or organizational unit responsible for applying an automated or manual procedure to support the execution of a process. **2.** Any person, organization, or functional unit that uses the services of an information processing system.

## Attachment 2

## AIR FORCE DATA DICTIONARY

**A2.1. Air Force Data Dictionary (AFDD).** This attachment explains how to prepare and submit AF Form 247, **Standard Data Element and Related Features Request**, to add, revise, or delete legacy data elements and to identify users of the data elements for inclusion in the AFDD only. Organizations needing to use an existing data element, data chain, or data use identifier, must register to use it by submitting a letter identifying the data element and the legacy system using the data element by the system's data system designator (DSD).

**A2.2.** Access to the Air Force Data Dictionary can be obtained as follows:

A2.2.1. Submit a letter to HQ AFCA/XPDP, 203 W. Losey Street, Room 1065, Scott AFB IL 62225-5224. Provide requested user's name, grade/rank, phone number (DSN and commercial), fax number, organization and office symbol, full mailing address, and e-mail address, if available. You may fax the letter to HQ AFCA/XPDP at DSN 576-8758 or commercial (618) 256-8758.

A2.2.2. Telephone the Program Support Branch at HQ AFCA, DSN 576-5700 or commercial (618) 256-5700.

A2.2.3. Complete the form contained under "AFCDD Account Requests" in the AFCA Data Management World Wide Web Home Page. The address is:

**http://infosphere.safb.af.mil/users/xpd/public_www/**

**A2.3.** Post changes made to the AFDD as necessary under the "AFDD Data Element Changes" in the AFCA Data Management Home Page under "AFDD Data Element Changes."

**A2.4.** Submit new data elements for new or migrated systems in compliance with DoD Manual 8320.1-M-1.

A2.4.1. Use plain bond paper if you need more space.

A2.4.2. Submit a separate form for each data element, data chain, or DUI.

A2.4.3. Initial pen and ink changes to verify approval by the office of primary responsibility (OPR).

**Table A2.1. Completing AF Form 247.**

| BLOCK | ITEM | ACTION TO TAKE |
|---|---|---|
| | Date | Enter the date prepared. |
| | Through | Enter the MAJCOM POC full address. |
| | To | Send to HQ AFCA/XPDP. |
| | From | Enter the office symbol of the originator. |
| 1 | Action Requested | Check Add block if adding new information to an established data element or related feature. Check Revise block if revising portions of an established data element or related feature. Check Delete block if deleting information from an established data element or related feature. |
| 2 | Applies To | Check Data Element block if action applies to data element title, definition, size, class, or short title. Check "data code" block if the action applies to a data code, data code definition, or short title. Check Data Chain block if the action applies to a data chain title, definition, size, class, or short title. Check Data Use Identifier block if the action applies to a data use identifier (DUI) title, definition, size, class, or short title. |
| 3 | Standard Identification (STID) Number | Enter the STID number for established data elements. |
| 4 | Data Element/Data Use Identifier/ Data Chain Title | Enter the unique title. The title must not exceed 116 characters, and contain keywords to convey an accurate and concise description. |

| BLOCK | ITEM | ACTION TO TAKE |
|---|---|---|
| 5 | Size | When you do not change the size of an established data element chain or DUI, enter NC (No Change): (1) For a data element, enter the number of character positions that will accommodate all known data codes, yet allow for expansion. (2) For a data chain, enter the sum of the data element or DUI sizes from the data elements or DUIs that form the chain. (3) For a DUI, enter the number of character positions used (DUI size cannot exceed the data element or chain size). In any case, the maximum allowable size is 29 characters. |
| 6 | Class | When you do not change the class of an existing data element, chain, or DUI, enter NC: (1) Enter A if using only alpha characters. (2) Enter N if using only numeric characters. (3) Enter AN if using alphanumeric characters. |
| 7 | Short Title (Optional) | Enter the unique abbreviation (for example, COBOL data-name) for the data element, chain, or DUI. The short title cannot exceed 24 characters. |
| 8 | Definition | Enter the definition of the data element, chain, or DUI. The definition must have a meaning significantly different from any other definition. No definition will refer to other Air Force documents for sources of definition. A definition may refer to other than Air Force documents only if those documents are readily available. A data chain definition must not change the meaning of those data elements or DUIs that form the chain, and must contain the data element titles and STIDs; or when no STID exists, the DUI titles that form the STID. |

| BLOCK | ITEM | ACTION TO TAKE |
|---|---|---|
| 9 | Data Code | Enter the alphanumeric (AN) sequence the data codes use. For data codes you must use letters, numbers, or any combination of these, including a blank or space. Use only AN characters (A to Z, 0 to 9). When using a blank, enter the word Blank. |
| 10 | Short Title (Optional) | Same as block 7. |
| 11 | Data Code Definition | Enter the unique definition of each corresponding data code. The data code definition must begin with a reference consisting of at least one, but not more than three, keywords. In the case of long, text-like definitions, use keywords as an abstract of the definition, to ensure you convey the meaning of the code. |
| 12 | Typed, Name, Grade, etc. | Enter the typed name, grade, title, office symbol, and extension of originator. |
| 13 | Signature | Signature of originator. |
| 14 | Coordination and Concurrence | Obtain local coordination before sending the request through channels. |
| 15 | Send Copy of Approved/ Disapproved AF Form 247 to: | Enter the address of individuals requesting a copy of the AF Form 247 after HQ AFCA/XPDP action. |
| 16 | Originator Control Number For Point of Contact Use For HQ AFCA/XPD Use Only | If the originator chooses to use a control number, enter it here. Enter the date received from originator, name, grade, office symbol, and signature of the MAJCOM POC. If the POC chooses to use a control number, enter it here. Air Force Component Data Dictionary Repository Office (HQ AFCA/XPDP) reviews the request, obtains coordination, and enters the control numbers, dates, and so forth. |

## Attachment 3

## QUESTIONS FOR DATA ADMINISTRATION CHECKLIST

### A3.1. HQ AFCA/XPD:

A3.1.1. Does the program manager ensure compliance with data management policies, standards, and procedures?

A3.1.2. Are quality control and reviews performed on data models?

A3.1.3. Are means provided to house data models and data elements?

A3.1.4. Is assistance provided to integrate Air Force inputs into the DoD data model?

A3.1.5. Are training requirements identified and funded?

### A3.2. Functional Data Coordinators (FDC).

A3.2.1. Do FDCs validate functional area activity and data models submitted by systems developers and database managers?

A3.2.2. Is assistance provided to integrate approved Air Force submissions into the DoD approved data models?

A3.2.3. Are functional area staff that support data administration properly trained?

A3.2.4. Do FDCs resolve differences in documentation with interested users?

### A3.3. Major Commands and Field Operating Agencies.

A3.3.1. Is the Data Administration Strategic Plan updated annually to identify short and long-range plans and resource requirements?

A3.3.2. Are systems designs, developments, modifications, modernizations, implementations, and life-cycle management efforts accomplished in compliance with DoD and Air Force directives?

A3.3.3. Are data submissions coordinated with functional activity or software development activity?

A3.3.4. Do solicitations relating to software development contain terms and conditions for enforcement of applicable Air Force data standardization directives?

A3.3.5. Are data administration training and resource requirements identified?

A3.3.6. Are efforts to measure and evaluate the use of standard data supported and maintained?

### A3.4. Air Force Central Design Activity (CDA), Software Development Activity (SDA), and Software Support Activity (SSA) Organizations.

A3.4.1. Is the exchange of data tracked between data bases, data systems, and functional lines?

A3.4.2. Are projected activities in data bases and systems compared to actual activities?

A3.4.3. Are deviations from approved logical models documented when developing physical data bases?

A3.4.4. Are data model packages developed new or re-engineered system development efforts?

A3.4.5. Are legacy systems re-engineered to extract application metadata and business rules for use in modernizing systems where feasible?

A3.4.6. Is the MDAd provided with data administration resource requirements and status of software development efforts requiring data element standardization?

A3.4.7. Is subject organization complying with DoD Manual 8320.1-M-1?

**A3.5. Air Education and Training Command.**

A3.5.1. Has training plans, materiel, and a training program to address data administration been developed?

A3.5.2. Have data administration curricula and formal courses identified by HQ USAF/SCTS been included in training plans?

**Attachment 4 (Added-AFMC)**

**SAMPLE COVER LETTER**

**DATA STANDARDIZATION PROPOSAL PACKAGE**

DEPARTMENT OF THE AIR FORCE
DATA MODELING CENTER (DMC)
MAXWELL AFB, GUNTER ANNEX AL 36114-3005

MEMORANDUM FOR HQ AFCA/XPDS 9 May 1995
HQ AFMC CSO/SCWT

FROM: DMC/ENSD
200 East Moore Drive
Maxwell AFB, Gunter Annex 36114-3004

SUBJECT: Proposal Package

1. The Data Modeling Center (DMC) is submitting the attached proposal package for inclusion in the DoD Data Model. DMC's model is a logical view of entities used in software applications developed at the DMC; this particular proposal package deals solely with the logistics area. Many of the software applications developed at DMC not only interface with one another, but represent cross-functional data sharing.

2. My POC is (Name), (organization), DSN: (number), E-Mail: address.

(Name)
(Rank/Grade), USAF
Chief, Data Standards Branch

6 Attachments:

1. Basic Package Information
2. Entity Information
3. Attribute Information
4. Relationship Information
5. Model View
6. Request for Registration of Use Forms

## BASIC PACKAGE INFORMATION

1. DoD Sponsoring Organization: DMC/ENSD
   200 East Moore Drive
   Maxwell AFB, Gunter Annex AL 36114-3004
   POC: (Name)
   DSN: 555-1234
   Comm: (205) 555-1234
   E-Mail: (E-Mail Address of POC)
2. Version Number And Date Of The DoD Data Model: 4-94, 30 Sep 94.
3. Component (or Functional) Data Administrator: HQ AFCA/XPDS
4. Proposal Package Functional Data Steward: DUSD(L)/DUSD(ES)
5. Functional Area ID: 009/079
6. Model Component Count:

   View 1. MATERIEL
   Number of Entities: 13 new; 6 reuse
   Number of Attributes: 25 new; 6 reuse
   Number of Relationships: 26

   View 2. SHIPMENT-UNIT-PLAN
   Number of Entities: 10 new; 2 reuse
   Number of Attributes: 42 new; 4 reuse
   Number of Relationships: 16

7. Tool Used: Design/IDEF, Version 2.5.1
8. Information Systems Supported by the Diagram: Conceptually, the data depicted in the attached model views supports the Logistics Module-Base Level (LOGMOD-B) system. LOGMOD-B supports logistics planning by supporting the following base-level processes: Unit Type Code (UTC) development; reporting materiel data to MAJCOM and other units; mobility planning; execution; tailoring; and feasibility/capability analysis.
9. Proposal packages based on non-IDEF1X data models shall provide the additional information:
   a. Technique used to develop model.
   b. Type of schema and notations used in the model.

## ENTITY INFORMATION

**Entities in DDDS**

| DDS Counter ID | Functional Area ID | Entity Name |
|---|---|---|
| 1947 | 009 | SHIPMENT-UNIT-PLAN |
| 1535 | 009 | SHIPMENT-UNIT-PLAN-ITEM |

**Entities NOT in DDDS**

1. **Entity Name:** CARGO-CATEGORY

2. **Entity Definition:** A classification of transportable goods by physical characteristics.

3. **Functional Area ID:** 009

4. **Entity Submission Type:** Developmental

5. **Attributes:**

   Name: CARGO-CATEGORY CONTAINERIZATION CODE
   Key Designation: Primary Key

   Name: CARGO-CATEGORY TYPE CODE
   Key Designation: Primary Key/Foreign Key

   Name: CARGO-CATEGORY EXTENT CODE
   Key Designation: Primary Key

6. **Prime Word (Entity) Using Proponent Model Name:** Wing Logistics Model #1

## ATTRIBUTE INFORMATION

**Attributes in DDDS**

DDRS

Counter ID Attribute Name

**Attributes NOT in DDDS**

1. **Attribute:**

   Name: CARGO-CATEGORY EXTENT CODE

   Definition: The code that represents the dimensional category of transportable goods.

2. **Attribute Role:** Primary Key

3. **Metadata Information:**

   Functional Area ID: 009

   Proposed Steward Name: ASD(P&L)

   Authority Reference Text: DoD 8320.1

   Comment Text: This data element represents the second position in the commonly used three-charac ter composite data element CARGO-CATEGORY CODE.

   Data Value Source List Text: JCS Pub 1-03.21 Table 18

   Domain Definition Text: A specific domain of ASCII characters 0-9 and A-D.

   Formula Definition Text:

   Decimal Place Count Quantity:

   Derivation Type Name: 3

   Low Range Identifier:

   High Range Identifier:

   Maximum Character Count:1

   Data Type Name: Character-String

   Security Classification Code: Unclassified

   Unit Measure Name:

   Domain Values:

| Identifier | Definition Text |
|---|---|
| 0 | Nonair Transportable unit equipment cargo: (A) Exceeds any of the dimensions 1453” x 216” x 156” or (B) has height between 114” and 156” and a width that exceeds 144.” |
| 1 | Outsized unit equipment cargo: Exceeds 1090” x 117” x 105” and is qualified by MILSTAMP aircraft air dimension code (too large for C-130/C141). |
| 2 | Oversized unit equipment cargo: Exceeds usable dimensions of 463L pallet (104” x 84” x 96”) or height is established by the cargo envelope of the particular model of aircraft. |

**RELATIONSHIP INFORMATION**

**1. Between Proposed Entities:**

Parent Entity: Cargo-Category
Child Entity: Shipment-Unit-Plan
Verb Phrase: Describes

Parent Entity: Cargo-Category
Child Entity: Shipment-Unit-Plan-Item
Verb Phrase: Describes

**2. With DoD Data Model:**

Parent Entity: Materiel
Child Entity: Materiel-Item
Verb Phrase: Describes

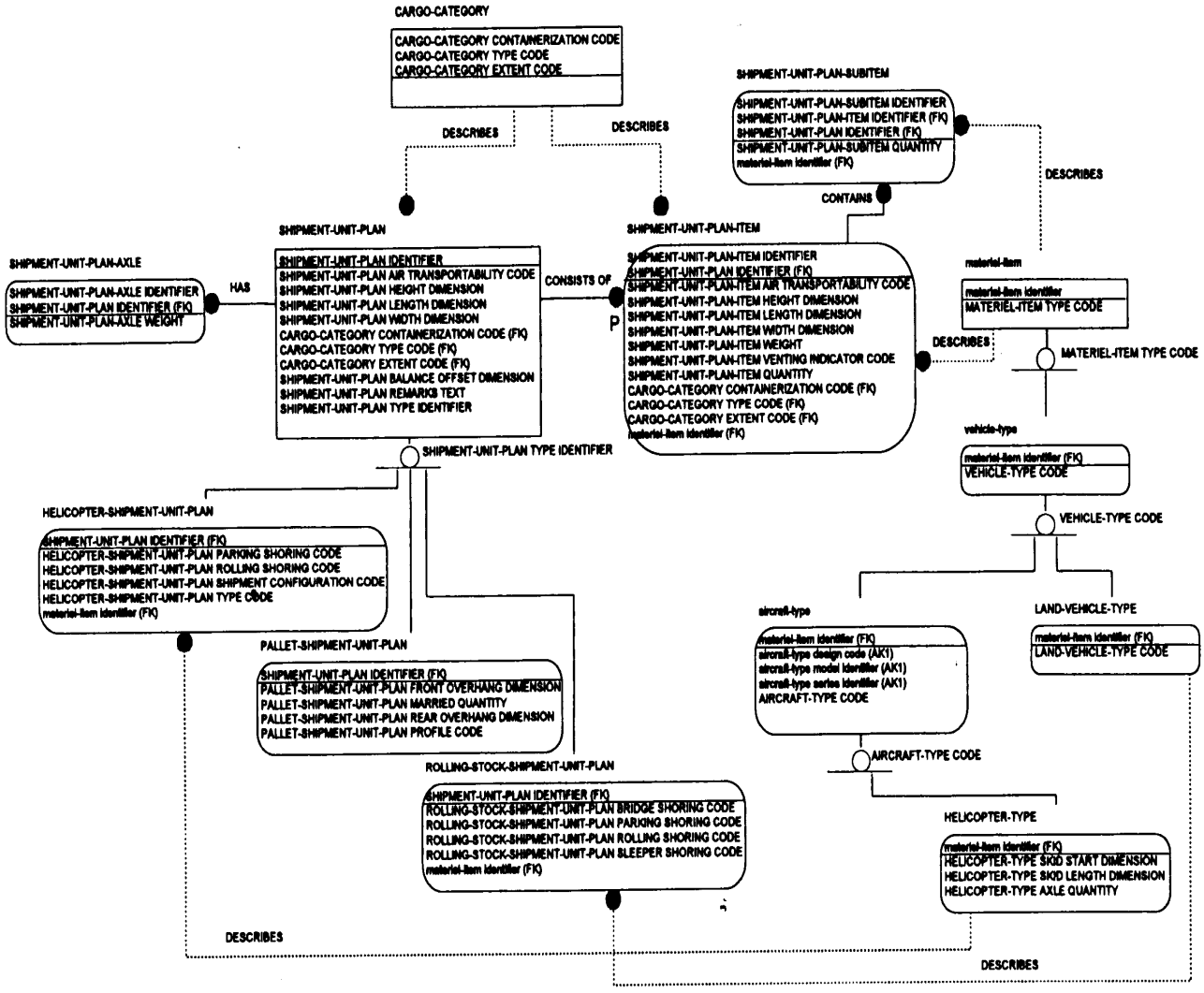
**3. Business Rules, Including Cordiality for Each Relationship:**

A CARGO-CATEGORY describes zero to many SHIPMENT-UNIT-PLANs.
A CARGO-CATEGORY describes zero to many SHIPMENT-UNIT-PLAN-ITEMs.

**MODEL VIEW**

**A COPY OF ALL YOUR MODEL VIEWS WILL BE PLACED IN ATTACHMENT 5**

## SHIPMENT-UNIT-PLAN



**REQUEST FOR REGISTRATION OF USE**

Element Name _____

Element Counter ID _____

Element Version Number _____

Name of the System Owning the Element _____

Your System Name _____

Is this a: Prime Word ____
Generic Data Element ____
Standard Data Element ____

## Attachment 5 (Added AFMC)

## IDEFIX DATA MODEL DEVLEOPMENT EXAMPLE

**1. Phase Zero - - Project Initiation.** Establish modeling objectives, develop modeling plan, organize team, collect source material, and adopt author conventions for the data model.

**2. Phase One - - Entity Definition.** Identify and define entities.

**3. Phase Two - - Relationship Definition.** Identify related entities, define relationships, and construct entity-level diagrams.

**4. Phase Three - - Key Definition.** Resolve nonspecific relationships, depict function views, identify key attributes, migrate primary keys, validate keys and relationships, define key attributes, and depict phase three results.

**5. Phase Four - - Attribute Definition.** Identify nonkey attributes, establish attribute ownership, define attributes, refine model, and depict phase four results.